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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,290	07/18/2003	Ronit Yahalomi	1662/611053	4123

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EXAMINER	
OH, TAYLOR V	

ART UNIT	PAPER NUMBER
1625	

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/623,290	YAHALOMI ET AL.	
	Examiner	Art Unit	
	Taylor Victor Oh	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-55* is/are pending in the application.

4a) Of the above claim(s) *1-30,40-50 and 52* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *31-39,51 and 53-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/19/04 & 8/5/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The Status of Claims

Claims 1-55 are pending.

Claims 31-39, 51, and 53-55 are rejected.

Claims 1-30 , 40-50, and 52 are withdrawn from consideration.

Election/Restrictions

Applicant's election with traverse of Group VII (claims 31-39 , 51, and 53-55) on 5/26/06 is acknowledged; since claims 53 and 54 are dependent on claim 51, the examiner has decided to include claim 51 to be considered in the present office action.

Claims 1-30 ,40-50 ,and 52 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected groups I –VI and VIII-XII, there being no allowable generic or linking claim.

Applicants argue in the followings:

a. applicants believe that examining the claims as a single group would not place an undue burden on the Examiner to search using the PTO's classification system since all the claims of the present application are in the same class and subclass; therefore, a minimal search is required for the examiner due to the extensive overlap of the art.

In response to applicants' argument regarding the restriction,

Groups I-XII are drawn to different products which must be examined based on the chemical and physical nature in comparison with those in the prior art. The search for each polymorphic form and its corresponding solvate are extremely burdensome and

are not co-extensive of each other. Particularly , there is no assignment of standard nomenclature for each different type of polymorphs, each polymorph must be searched for its chemical content and structure together with many distinctive physical data for the particular form; thus, these inventions are independent or distinct for the reasons given above regardless of each of them belonging to the same class and subclass.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 33, the phrase " substantially" is recited. This expression is vague and indefinite because the specification does not elaborate what is meant by the term " substantially." Therefore, an appropriate correction is required.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 31-36 , 51, and 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumikawa et al (U.S. 5,488,150).

Sumikawa et al discloses the stable crystals of N-(trans-4-isoproylcyclohexylcarbonyl)-D-phenylalanine compound obtained from the example A1 in the followings:

> 20 ml of an acetone solution of 5 g of N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine were added dropwise to a stirred mixture of acetone (40 ml) and water (60 ml) at 25° C. After cooling to 10° C., the precipitated crystals were filtered and dried at 90° C. at reduced pressure overnight. 4.5 g of dry crystals were obtained. The crystals had a melting point of 138° to 141° C. The powder X-ray diffraction pattern and the infra-red absorption spectrum were measured and the crystals were thus identified as H-type.

(see col. 6 ,lines 43-51).

> The solid N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine suspended in suitable solvent may be of any type, such as amorphous, or in the form of B-type crystals and may be a solvate, e.g. hydrate, methanolate, ethanolate, isopropanolate or acetonitrilate. The amorphous powder may be derived by drying a solvate. Preferably, the suspension is maintained at a temperature of at least 10° C. for sufficiently long that the product crystals contain enhanced amounts of H-type crystals relative to the starting N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine.

(see col. 5 ,lines 10-19).

> Solvents suitable for use in this embodiment of the invention include water, esters such as methyl acetate and ethyl acetate, as well as toluene. Good solvents in which N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine is more readily soluble for example in amounts of at least 1% by weight at 30° C., such as lower alcohols e.g. methanol, ethanol and isopropanol, as well as acetone, acetonitrile, tetrahydrofuran and dioxane may also be used

(see col. 5 ,lines 43-51).

Furthermore, the prior art teaches that a method for treating a human to depress its glucose level by using the stable crystals of N-(trans-4-isoproylcyclohexylcarbonyl)-D-phenylalanine compound as well as its pharmaceutical composition (see col. 6 ,lines 6-23).

However, the instant invention differs from the prior art in that the claimed nateglinide (form ε) is unspecified.

With respect to the lack of teaching nateglinide form ε , the prior art is silent. However, the prior art does offer guidance that the solid trans-4-isoproylcyclohexylcarbonyl)-D-phenylalanine compound suspended in suitable solvent may be of any type (see col. 5 ,lines 10-12), which does include the possible formation of nateglinide form ε during the prior art process. This is because the prior art process does use the claimed solvents such as acetone, acetonitrile in the claimed process(see col. 5, lines 20-27). Therefore, it would have been obvious to the skilled artisan in the art to be motivated to find the claimed nateglinide form ε by routine experimentation in the Sumikawa et al process. This is because the skilled artisan in the art would expect such a process to be successful and feasible due to the presence of the suitable claimed solvents in the Sumikawa et al process.

Sumikawa et al expressly teaches the possible formation of ε-type crystals of N-(trans-4-isoproylcyclohexylcarbonyl)-D-phenylalanine compound as guidance shown in the passages (see col. 5 ,lines 10-12). Therefore, in order to produce the ε-type crystals of N-(trans-4-isoproylcyclohexylcarbonyl)-D-phenylalanine compound at the large industrial scale, it would have been obvious to the skilled artisan in the art to be motivated to investigate the claimed nateglinide form ε by routine experimentation in the Sumikawa et al process. This is because the skilled artisan in the art would expect

such a process to be successful and feasible due to the presence of the suitable claimed solvents present in the Sumikawa et al process.

2. Claims 31-39 , 51, and 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumikawa et al (U.S. 5,488,150) in view of Grant & Hackh's Chemical Dictionary (fifth ed., page 396, 1987).

Sumikawa et al discloses the stable crystals of N-(trans-4-isoproylcyclohexylcarbonyl)-D-phenylalanine compound obtained from the example A1 in the followings:

> 20 ml of an acetone solution of 5 g of N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine were added dropwise to a stirred mixture of acetone (40 ml) and water (60 ml) at 25° C. After cooling to 10° C., the precipitated crystals were filtered and dried at 90° C. at reduced pressure overnight. 4.5 g of dry crystals were obtained. The crystals had a melting point of 138° to 141° C. The powder X-ray diffraction pattern and the infra-red absorption spectrum were measured and the crystals were thus identified as H-type.

(see col. 6 ,lines 43-51).

> The solid N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine suspended in suitable solvent may be of any type, such as amorphous, or in the form of B-type crystals and may be a solvate, e.g. hydrate, methanolate, ethanolate, isopropanolate or acetonitrilate. The amorphous powder may be derived by drying a solvate. Preferably, the suspension is maintained at a temperature of at least 10° C. for sufficiently long that the product crystals contain enhanced amounts of H-type crystals relative to the starting N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine.

(see col. 5 ,lines 10-19).

> Solvents suitable for use in this embodiment of the invention include water, esters such as methyl acetate and ethyl acetate, as well as toluene. Good solvents in which N-(trans-4-isopropylcyclohexylcarbonyl)-D-phenylalanine is more readily soluble for example in amounts of at least 1% by weight at 30° C., such as lower alcohols e.g. methanol, ethanol and isopropanol, as well as acetone, acetonitrile, tetrahydrofuran and dioxane may also be used

(see col. 5 ,lines 43-51).

Furthermore, the prior art teaches that a method for treating a human to depress its glucose level by using the stable crystals of N-(trans-4-isoproylcyclohexylcarbonyl)-D-phenylalanine compound as well as its pharmaceutical composition (see col. 6 ,lines 6-23).

However, the instant invention differs from the prior art in that crystallizing the crystalline of nateglinide from the solution containing nitromethane is unspecified; the claimed nateglinide (form ε) is also unspecified.

With respect to the lack of teaching nateglinide form ε , the prior art is silent. However, the prior art does offer guidance that the solid trans-4-isoproylcyclohexylcarbonyl)-D-phenylalanine compound suspended in suitable solvent may be of any type (see col. 5 ,lines 10-12), which does include the possible formation of nateglinide form ε during the prior art process. This is because the prior art process does use the claimed solvents such as acetone, acetonitrile in the claimed process(see col. 5, lines 20-27). Therefore, it would have been obvious to the skilled

artisan in the art to be motivated to find the claimed nateglinide form ε by routine experimentation in the Sumikawa et al process. This is because the skilled artisan in the art would expect such a process to be successful and feasible due to the presence of the suitable claimed solvents in the Sumikawa et al process.

Regarding the absence of crystallizing the crystalline of nateglinide from the solution containing nitromethane , Sumikawa et al has indicated that the solvents suitable for use include water , esters, acetone, acetonitrile and etc. (see col. 5, lines 20-27); furthermore, Grant & Hackh expressly discloses a well-known solvent of nitromethane soluble in water (see page 396). Therefore, it would have been obvious to the skilled artisan in the art to be motivated to use Grant's well known nitromethane solvent as an alternative to water shown in the Sumikawa et al process. This is because the skilled artisan in the art would expect such a modification to be successful in the absence of an unexpected result.

Sumikawa et al expressly teaches the possible formation of ε-type crystals of N-(trans-4-isoproylcyclohexylcarbonyl)-D-phenylalanine compound as guidance shown in the passages (see col. 5 ,lines 10-12). Furthermore, Grant & Hackh expressly discloses a well-known solvent of nitromethane soluble in water (see page 396). Therefore, it would have been obvious to the skilled artisan in the art to be motivated to use Grant's well known nitromethane solvent as an alternative to water shown in the Sumikawa et

al process. This is because the skilled artisan in the art would expect such a modification to be successful in the absence of an unexpected result.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas McKenzie can be reached on 571-272-0670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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